# DaimlerChrysler

December 15, 2004

Mr. Ronald L. Medford Senior Associate Administrator, Vehicle Safety National Highway Traffic Safety Administration 400 Seventh Street, S.W. NVS-010 Washington, D.C. 20590

**DaimlerChrysler Corporation** Stephan J. Speth

Director Vehicle Compliance & Safety Affairs

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Dear Mr. Medford:

As you were verbally informed last Friday, DaimlerChrysler Corporation (DCC) is conducting a recall on 2000 - 2003 model year Dodge Durango and Dakota four wheel drive vehicles to resolve concerns related to front suspension upper ball joint wear. DCC feels that this action is well beyond what is necessary to address the issues identifed in the agency's investigation, and while it is being called a "Safety Recall" in the customer communication, it is not being conducted in accordance with the Safety Act. DCC is not declaring that this is a "safety related defect", because there has been none identified. The actions taken by ODI's staff relative to this matter in combination with the substantial prejudiced and inaccurate publicity associated with this investigation have left DCC with no choice but to proceed with this campaign to address its customers' concerns. Unfortunately, this entire episode will now result in significant customer inconvenience due to unnecessary repairs to many vehicles that do not need them.

DCC will voluntarily replace the upper ball joints on subject vehicles with a revised assemblies having improved sealing integrity. Owners who have previously paid for this repair will be reimbursed with adequate proof. This action does not constitute a defect determination.

Sincerely

Stephan J. Speth

Enclosures: Information Report for DaimlerChrysler Corporation Recall D47 Dealer and Owner Notification Letters - Recall D47

K. N. Weinstein, NHTSA CC:

K.C. DeMeter, NHTSA

Division of Occupational Safety & Health California Department of Industrial Relations Submission date: December 15, 2004

## Identifying classification of vehicles potentially affected:

Make	Model	Model Year	Inclusive Dates of Manufacture	Vehicle Volume	Other
Dodge	Durango, Dakota	2000 – 2003	1/7/1999 – 12/31/2002	592,707	Four wheel drive (4x4) only

The involved Vehicle Identification Number (VIN) range is:

<u>High</u>
YF309376
YS801005
1F646763
1\$352164
2F221779
2\$726717
3F557642
3\$241508

(VIN last eight characters) – Y = 2000 model year; 1 = 2001 model year; 2 = 2002 model year; 3 = 2003 model year; F = 1000 mod

We caution that the above range represents only the lowest and highest VIN sequential numbers included in the recall. This range cannot be used to determine conclusively that a vehicle is involved in the recall because many vehicles with a VIN within the range are not affected by the recall.

Estimated percentage containing issue: Unknown

### **Description of Condition:**

If moisture leaks into the front suspension upper ball joint, evacuation of the lubricant and corrosion of the joint may cause the joint to wear progressively over an extended period of time. If multiple warning signs are ignored and not addressed in a reasonable period of time, the joint may eventually separate during a low speed, high suspension articulation maneuver.

#### Background and chronology:

On June 6, 2003, a CBS reporter contacted DaimlerChrysler Corporation (DCC) about a

- wheel separation that occurred on her 2000 MY Dodge Durango four wheel drive vehicle. The reporter provided the subject components from her vehicle to NHTSA.
- On July 17, 2003, NHTSA opened PE03-032 alleging front suspension upper ball joint separation on 1998-2003 MY Dodge Durango vehicles.
- At the time of DaimlerChrysler Corporation's response to NHTSA on September 5, 2003, DCC was aware of 4 documented upper ball joint separations for the subject vehicles, which represented a rate of 0.45 conditions per 100,000 vehicles.
- It was established that the suspension of the Durango (DN) and Dakota (AN) vehicles
  uses a compression-type (at curb) upper ball joint design. This design limits the possibility
  of any potential separation to low speed, high articulation events and is markedly different
  from the lower control arm tension-type ball joints that were the subject of previous safety
  recalls on Chrysler Cirrus, Dodge Stratus, Plymouth Breeze, Plymouth Prowler and Jeep
  Liberty vehicles.
- The ball joint supplier for the 1997-1999 MY AN/DN vehicles was TRW. For the 2000 MY, the supplier was changed to New Castle Machine and Forge (NCM).
- The NCM designed ball joint utilized a two-piece bearing between the housing and ball stud. If moisture leaked between the housing and cap at the crimp seal, such a leak could result in evacuation of the lubricant and ultimately corrosive wear of the ball joint over an extended period of time.
- In January of 2003, the bearing was changed to a one piece design, which improved sealing integrity and nullified the leak potential. Additional processing changes that improved the sealing operation were also implemented.
- The NCM designed ball joint differed from the TRW design in that the housing throat opening at the ball stud was larger. In the event that an operator were to ignore the lengthy warnings associated with a severely worn upper ball joint, the NCM design may be more likely to separate than the TRW design; however, at some level of severe wear, any ball joint will separate, regardless of the size of the throat opening.
- The AN/DN Owner's Manuals provide multiple advisories regarding wear, and state that "the (front suspension) ball joints and seals should be inspected whenever the vehicle is serviced," and that once a month the operator should "check tire pressure and look for unusual wear."
- On October 27, 2003, the CBS Evening News aired the first of four prejudiced stories
  relative to the subject ball joints. There were dramatic spikes in the quantity of ball joint
  complaints following each of these stories. Evaluation showed that the majority of these
  complaints were related to the cost of ball joint service or to the extensive media
  coverage.
- The investigation was upgraded to EA03-023 on November 20, 2003 with a focus on 2000-2002 MY DN vehicles, although the Dodge Dakota was now included for the same model years as well.
- At the time of DaimlerChrysler Corporation's March of 2004 response to EA 03-023, DCC was aware of 18 additional documented upper ball joint separations for the increased scope of subject vehicles (Durango and Dakota), which in total represented a rate of approximately 1 condition per 100,000 vehicles.
- Extensive AN/DN testing by DCC has shown that the maximum tensile upper ball joint load measured in abusive vehicle testing is less than 1250 pounds, regardless of drive

- configuration, and only exists for a very short duration. Additional testing has shown that the tensile load required to separate an upper ball joint is over 4800 pounds for a ball joint with nearly 0.400 inches of end play. This end play was the most extreme observed by DCC, and was over six (6) times the ball joint replacement specification of 0.060".
- Test data also showed that the low speed, high articulation events in conjunction with a
  rebound condition that result in the highest measured tensile loads only occurred for a
  very short duration of time. In all other steady state driving events, the tensile load at the
  ball joint is virtually zero.
- An analysis of complaint data through September 7, 2004 found 42 documented cases of AN/DN upper ball joint separation due to grinding corrosion. The vast majority of these documented cases (41 of 42) were four wheel drive vehicles as well as (41 of 42) NCM equipped vehicles. Most were registered in states classified with corrosive salt environments. The average age of these 42 vehicles was over 41 months and the average mileage over 56,500.
- Investigation showed that when compared to the two wheel drive upper control arm, the
  four wheel drive upper control arm is 62mm shorter in length from the pivot to the ball
  joint, and can have up to a 20 pound greater un-sprung mass. This potentially
  contributes to the higher four wheel drive separation rate, although this has not been
  proven.
- DCC is not aware of any substantiated injuries or multi-vehicle accidents caused by this
  condition in the subject vehicles.
- DCC offered NHTSA a substantial solution to resolve this issue on the basis of a field action on the oldest vehicles and an extended warranty for the remainder of the NCM upper ball joint assemblies. NHTSA rejected this offer, even though it has accepted similar settlements for similar issues in the past from other manufacturers.
- Although NHTSA has closed other ball joint investigations with separation rates at or near
  that of the AN/DN four wheel drive NCM population, on November 23, 2004, DCC
  received a letter from NHTSA requesting that DCC conduct a safety recall per 49 U.S.C.
  § 30118 of the NCM upper ball joints on 2000-2003 MY AN/DN 4x4 vehicles.
- On December 10, 2004, DCC responded to NHTSA's letter and declined to conduct a safety recall per 49 U.S.C. § 30118.
- This data was presented to the DCC Vehicle Regulations Committee (VRC) on December 10, 2004. To avoid a protracted dispute with the government and to address the public concerns raised as a result of the substantial publicity associated with this investigation, the committee decided to conduct a recall to replace the upper ball joint on subject vehicles with a revised assembly having improved sealing integrity. This recall will be called a "Safety Recall" in the dealer and consumer notifications, and will be included in the dealer database of safety recalls, but it will not be conducted in accordance with the Safety Act.
- This action does not constitute the determination of a Safety Defect.

#### Statement of measures to be taken:

DaimlerChrysler Corporation will conduct a voluntary safety recall to replace the front

suspension upper ball joints on all affected vehicles. DaimlerChrysler implemented dealer notification on December 14, 2004, and will begin owner notification on December 20, 2004.

DaimlerChrysler Corporation has a longstanding policy and practice of reimbursing owners who have incurred the cost of repairing a problem that subsequently becomes the subject of a field action. To ensure consistency, DaimlerChrysler Corporation, as part of the owner letter, will request that customers send original receipts and/or other adequate proof of payment to the company for confirmation of the expense.